St. Bartholomew's Hospital

"Æquam memento rebus in arduis
Servare mentem."
—*Horace*, Book ii, Ode iii.

JOURNAL.

VOL. XLI.—No. 8.] MAY 1ST, 1934. PRICE NINEPENCE.

CALENDAR.

Tues.,	May	1.	—Dr. Graham and Mr. Roberts on duty.
Wed.,	,,	2.	—Surgery: Clinical Lecture by Sir Charles Gordon-Watson. Cricket Match *v.* Wanderers. Home.
Fri.,	,,	4.	—Medicine: Clinical Lecture by Lord Horder.
Mon.,	,,	7.	—Prof. Fraser and Prof. Gask on duty. Special Subject: Clinical Lecture by Mr. Bedford Russell.
Tues.,	,,	8.	—Lord Horder and Sir Charles Gordon-Watson on duty.
Wed.,	,,	9.	—**View Day.**
Fri.,	,,	11.	—Medicine: Clinical Lecture by Dr. Hinds-Howell, Dr. Hinds-Howell and Mr. Harold Wilson on duty.
Sat.,	,,	12.	—Cricket Match *v.* U.C. Old Boys. Home.
Mon.,	,,	14.	—Special Subject: Clinical Lecture by Mr. Elmslie.
Tues.,	,,	15.	—Dr. Gow and Mr. Girling Ball on duty.
Wed.,	,,	16.	—Surgery: Clinical Lecture by Mr. Harold Wilson.
Fri.,	,,	18.	—Medicine: Clinical Lecture by Dr. Graham.
Sat.,	,,	19.	—Cricket Match *v.* Metropolitan Police. Away. **Last day for receiving matter for the June issue of the Journal.**
Sun.,	,,	20.	—**Whit Sunday.**
Mon.,	,,	21.	—**Bank Holiday.**
Tues.	,,	22.	—Prof. Fraser and Prof. Gask on duty.
Wed.,	,,	23.	—Surgery: Clinical Lecture by Mr. Girling Ball. Cricket Match *v.* The Times C.C.
Fri.,	,,	25.	—Medicine: Clinical Lecture by Dr. Gow. Lord Horder and Sir Charles Gordon-Watson on duty.
Sat.,	,,	26.	—Cricket Match *v.* St. John's College, Cambridge.
Mon.,	,,	28.	—Special Subject: Clinical Lecture by Mr. Bedford Russell.
Tues.,	,,	29.	—Dr. Hinds-Howell and Mr. Harold Wilson on duty.
Wed.,	,,	30.	—Surgery: Clinical Lecture by Mr. Girling Ball.
Thurs.,	,,	31.	—Cricket Match *v.* M.C.C. Home.

EDITORIAL.

THE advent of May brings to Hospital, as to our own homes, that season of annual cleaning which overthrows the equilibrium of everyday life and disturbs the tranquillity for which the average human mind for ever craves.

Painters, window cleaners, wall scrubbers go about their tasks with grim determination, not caring that in the Square our favourite seat is coated by fresh paint, or that for the moment the daily activities are entirely chaotic. It is for "View Day" that this fevered toil is undertaken, and the Hospital, like a little girl in her new Sunday frock, is made to be on its best behaviour for a few brief hours.

What an air of artificiality the *Alma Mater* wears on this historic afternoon—who associates the Square with Ascot as a fashion parade or Elizabeth Ward with the crowds of admirers that might be in attendance at a Wembley Cup Final! To us the nooks and crannies bring back memories of the real Bart.'s we know so well—of the mother's pain and joy as we delivered her first child at early dawn, of the Square's winter shadows as we passed across to do our evening ward round, of lordly processions in the wards with some chief on hot summers' afternoons, and of pungent ether vapour. This is the place we love and live in, but on View Day, like pilgrims, we visit old battle-fields where so many of our past victories and defeats were made.

This spring cleaning, which affects our external comfort so considerably, should permeate internally to be a thorough success. Even the best brains need occasional dustings, so let us depart annually from the rut of our supposed Orthodoxy and explore the realms of other people's Heterodoxy. A mental view-day when we could display our current ideas and discuss them with

people from other schools should be instituted by someone with sufficient courage.

* * *

Once more, with the passage of time, an Editor has sung his swan-song and has passed from the narrow limits of the life here around the Fountain and the plane-trees to the expanses of the great world outside.

It is our sad lot to record the retirement of Mr. J. M. Jackson and to attempt to give expression to our feelings of genuine regret. Just as sincere are our wishes for his good success and the hope that he will receive the distinction in his career that so many of his predecessors have obtained.

* * *

We congratulate Dr. E. R. Cullinan on his election to the Fellowship of the Royal College of Physicians.

* * *

We have received the following notice from the Secretary of the Women's Guild:

"We should like to issue a cordial invitation to everyone interested in the Hospital and its work to be present at our Annual View Day Meeting, to be held in the Great Hall on Wednesday, May 9th, at 4.15 p.m.

"This year we have been very fortunate in securing the patronage of the Lady Mayoress. Bishop Paget, formerly Bishop of Chester, whose name in connection with the Hospital is too well known to need further introduction, and Major Ian Hay Beith, C.B.E., M.C., who also will be remembered not only by his books, but by the delightful speech which he made at our Annual Meeting a few years ago, have kindly consented to be our Speakers.

"Please come and bring as many friends as possible, so that we may have a large audience to show our appreciation.

"Tea will be served at the end of the meeting, to which all are cordially invited."

Memories of past meetings will be sufficient, we feel, to direct the footsteps of all to a packed Great Hall when the attraction of the wards and the fascination of "Lizzie" begin to pall.

* * *

Our congratulations are offered to Mr. H. J. Seddon on sharing with another surgeon the distinction of winning the Robert Jones Medal of the British Orthopædic Association, and to Mr. H. Jackson Burrows for being awarded a certificate of honourable mention in the Jacksonian Prize at the Royal College of Surgeons.

A very enjoyable afternoon and evening were passed on Saturday, April 14th, when the Rugby Football Club held their Inter-Firm Seven-a-side Tournament and a dance, in aid of the College Appeal Fund.

The magnificent cup presented by the Staff was won by the Yellow Firm, resplendent in their flavined jerseys, who defeated the Pinks in the final. Mr. Girling Ball awarded the Cup and expressed the hope, echoed by all, that the function would become an annual one.

* * *

We have received a letter announcing a tour in the U.S.S.R. for students of the London hospitals during the next summer vacation. The object is the study of contemporary developments in medicine and public health, and is attained by visits, conducted by the authorities, to hospitals, prophylactoria and crèches.

The trip will be by the Intourist Service to Leningrad and Moscow, and will occupy three weeks. The cost will be approximately £1 per day inclusive. We will be glad to give further particulars to any interested.

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COLLEGE APPEAL FUND.

	£	s.	d.			
Staff	12,529	4	10	(71)		
Demonstrators	1,674	11	0	(67)		
Students	712	0	5	(284)		
Old Bart.'s men:						†
Bedfordshire	12	11	6	(4)	.	(26)
Berkshire	96	1	0	(14)	.	(37)
Buckinghamshire	74	19	0	(13)	.	(29)
Cambridgeshire	165	14	0	(13)	.	(42)
Cheshire	1	1	0	(1)	.	(26)
Cornwall	22	2	0	(5)	.	(36)
Cumberland	5	0	0	(1)	.	(6)
Derbyshire	19	14	0	(4)	.	(17)
Devonshire	557	14	0	(52)	.	(117)
Dorset	52	1	0	(14)	.	(30)
Durham	16	6	0	(3)	.	(11)
Essex	229	19	6	(17)	.	(69)
Gloucestershire	212	13	6	(20)	.	(66)
Hampshire	406	14	0	(38)	.	(134)
Herefordshire	13	3	0	(4)	.	(11)
Hertfordshire	76	3	0	(13)	.	(73)
Huntingdonshire						(1)
Isle of Wight	181	13	0	(12)	.	(25)
Kent	558	3	0	(64)	.	(146)
Lancashire	91	4	6	(12)	.	(82)
Leicestershire	133	12	0	(6)	.	(28)
Lincolnshire	47	6	0	(13)	.	(25)
Middlesex	382	3	0	(18)	.	(68)
Norfolk	159	7	6	(18)	.	(60)
Northamptonshire	54	4	0	(4)	.	(17)
Northumberland	101	1	0	(2)	.	(11)
Nottinghamshire	13	13	0	(2)	.	(28)
Oxfordshire	185	3	0	(18)	.	(29)
Rutland						(2)
Shropshire	35	9	0	(8)	.	(22)
Somersetshire	1013	10	0	(26)	.	(43)
Staffordshire	194	18	0	(6)	.	(37)
Suffolk	263	11	0	(17)	.	(46)
Carried forward	£20,292	10	9			

	£	s.	d.		†
Brought forward	20,292	10	9		
Surrey	434	16	6	(47)	(180)
Sussex	272	2	0	(48)	(170)
Warwickshire	178	1	6	(18)	(56)
Westmorland	1	0	0	(1)	(5)
Wiltshire	97	11	0	(11)	(26)
Worcestershire	153	19	6	(24)	(24)
Yorkshire	270	4	6	(21)	(101)
Wales	56	4	0	(12)	(150)
London	2,747	16	8	(176)	(971)
Channel Islands	10	0	0	(1)	(9)
Scotland	14	4	0	(4)	
Abroad	48	5	0	(7)	
South Africa	326	10	6	(17)	
Canada	113	2	6	(8)	
East Africa	72	7	0	(8)	
West Africa	146	10	0	(5)	
India	152	0	0	(7)	
Ceylon	4	0	0	(1)	
Syria	2	2	0	(1)	
U.S.A.	5	0	0	(1)	
Ireland	14	14	0	(3)	
North Africa	1	0	0	(1)	
North Borneo	5	5	0	(1)	
Australia	12	2	0	(3)	
Egypt	4	2	0	(2)	
Malay States	6	0	0	(2)	
China	45	7	4	(7)	
Siam	10	0	0	(1)	
France	50	0	0	(1)	
Trinidad	22	2	0	(2)	
British West Indies	23	1	0	(3)	
New Zealand	2	1	0	(2)	
Services	524	14	0	(34)	
Others	31,810	9	1	(286)	
	£57,929	4	10		

† Number of Bart.'s men in County.

OBITUARY.

DR. C. E. TANNER.

DR. C. E. TANNER, who died last April, was born in 1861, the third of the five sons of a Wiltshire yeoman. He was educated at Clifton College, at St. Bartholomew's Hospital, and at the Newcastle-upon-Tyne Medical School, where he graduated M.D. of the University of Durham in 1888. He acted for a year as House Physician at the Royal Free Hospital, and settled in practice at Farnham, in Surrey. Here his handsome presence, his courteous manners and his sound professional knowledge soon gained him the large practice which he carried on by means of a high dogcart drawn by a blood mare. Paying a tribute to him on one occasion, Archbishop (Lord) Davidson said that the doctor had known successively six bishops, occupants of Farnham Castle, and that five of them had been his patients. He had known them inside and out. He had mended them in heads and hearts, and legs and middles, and in those ways there had sprung up an intimacy of home life, a relationship of affection such as they entertained for those in home life. Such a relationship Dr. Tanner also maintained with the richest and the poorest of his patients, with soldiers and lawyers, with country gentlemen and with labourers. Could greater praise be given to any medical man?

Throughout his life he took an active part in the affairs of Farnham. He was medical officer for the Rural District Council, and to the Infirmary. He was the virtual founder of the Children's Convalescent Home at Tilford, for a patient gave him a sum of money to be applied at his discretion. He was a moving spirit in establishing the Farnham swimming-baths, and he was instrumental in forming the Wey Valley Water Company. He was, too, a Justice of the Peace for the County of Surrey. He retired from practice in 1924, and was the recipient of a testimonial from his many friends "in token of their gratitude and affection". He married in 1905 Mary Louise Graham, who was then superintendent nurse at the Farnham Infirmary. She survives him with a son and three daughters. Husband and wife, with the help of some enthusiastic guardians, soon brought the Infirmary to a high pitch of excellence.

D'A. P.

§

CASES FROM THE WARDS.*

II.

"Complete investigation of the genito-urinary tract is demanded in all cases of urinary infection."

UNLESS complete investigations of the urinary tract are made in all cases of infection associated therewith, many patients will be doomed to persistent or recurrent illnesses which can be cured. It is such a common experience that palliative methods of treatment have been tried before investigations have been suggested that it seems desirable to consider the two following cases. Many lessons can be drawn from them.

CASE I.—A female, æt. 26, came under the care of Dr. Geoffrey Evans recently, with the story that two and a half years ago, following an attack of influenza, she had pains all over the abdomen and in both lumbar regions. The attack lasted for a week and was accompanied by fever. At the same time she noticed that there was an increased frequency of micturition, F. = 6–7/1–2. She also had a slight pain on passing her water. The acute symptoms rapidly subsided, but the increased frequency persisted.

Six months ago an infection of her urine was discovered, and she was given a ketogenic diet, which had no effect in improving her condition. Little further notice was taken of this infection until she was admitted to the Hospital; she was regarded as a neurasthenic patient.

* Notes of a Clinical Lecture given at St. Bartholomew's Hospital on Wednesday, February 21st, 1934.

On examination she appeared to be a perfectly healthy girl, and no abnormality could be discovered in her abdomen; neither kidney could be felt. The urine was not obviously very turbid, but a few pus-cells were found on standing; on culture a pure growth of the *Bacillus coli communis* was obtained.

FIG. 1.

FIG. 2.

As diuretic treatment and general attention to the bowel, etc., had no effect, further investigations were carried out.

Radiography.—(1) A straight X-ray of the urinary tract showed no abnormality.

(2) An intravenous pyelography (Fig. 1) by the injection of uroselectan was said to show that both pelves were dilated, and the right kidney was rather low.

The blood-urea was 35 mgrm.%.

Urea-concentration test.—1st hour, 65 c.c. of urine, 1·75% of urea; 2nd hour, 45 c.c. of urine, 2·65% of urea; 3rd hour, 58 c.c. of urine, 2·55% of urea.

Cystoscopy.—The bladder was normal, except that there was some slight congestion of the trigone. Both ureteric orifices had normal appearances, and the efflux seen from each side was apparently clear.

Ureteric catheterization.—*From the right kidney* the urine contained pus-cells, red blood-cells, and a pure culture of the *Bacillus coli communis* was obtained.

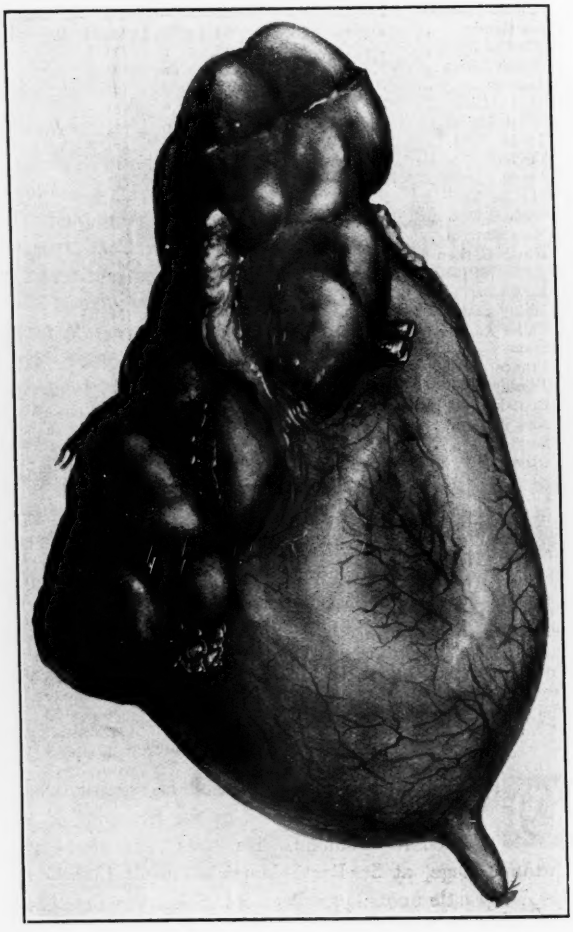

FIG. 3.

From the left kidney there were no abnormal constituents in the urine, and the cultures were sterile.

A retrograde pyelography (Fig. 2) showed much the appearances shown by the intravenous pyelogram on the left side; the pelvis held only 12 c.c. of sodium bromide, which was almost within the range of normality, although perhaps a little in excess. The right pelvis, however, held 50 c.c. of sodium bromide and was then not completely distended, and gave the typical appearances of a pelvic hydronephrosis.

The right kidney was removed, and is seen (Fig. 3) merely to consist of a bag with a small amount of renal tissue forming a cap over the distended sac. The distension commences at the ureteropelvic junction.

Four weeks after the operation the patient was free from symptoms, and the urine was clear and uninfected.

CASE 2.—A female, æt. 2, admitted under the care of Dr. Harris for " trouble with her water ".

At the age of three months it was noticed that the urine was thick ; otherwise the health of the baby was good.

When she was nine months old her urine was discovered to be infected, and medicinal treatment was tried, without effect.

Six months before admission the child had some fever, and there had been many similar attacks of fever since that date. The attacks lasted for two or three days, and came on every three or four weeks, but had been increasing in frequency during the past three months. The urine became very offensive in the attacks.

The child did not look well, and was losing weight.

On examination of the abdomen neither kidney could be felt.

The urine was very turbid and contained much pus ; a pure culture of the *Bacillus coli communis* was obtained.

The child was given medicinal treatment without any effect, and it was then decided to investigate further.

Radiography.—(1) Plain films showed no abnormality in the urinary tract.

(2) The dye, after an intravenous injection of uroselectan, failed to concentrate in either kidney.

FIG. 4.

Cystoscopy.—The left ureteric orifice appeared to be normal, and the efflux clear. The right ureteric orifice was swollen, and so œdematous that the orifice could not be seen; neither was there any obvious efflux from it.

Retrograde pyelography showed a normal left renal pelvis which held 2½ c.c. of sodium bromide.

Three weeks later a further cystoscopic examination was made, and both ureteric orifices were easily seen and appeared to be normal.

Ureteric catheterization of the left kidney again showed no abnormality in the urine, which was sterile on cultivation, whereas the urine from the right ureter contained pus-cells and a pure growth of the *Bacillus coli communis.*

A right-sided retrograde pyelogram and ureterogram (Fig. 4) was then made, and it was found that the renal pelvis held 15 c.c. of sodium bromide, and gave the characteristic appearance of a pelvic hydronephrosis and a greatly dilated ureter down to the uretero-vesical junction.

The right kidney and ureter were completely removed. The kidney merely formed a shell over a sac, and the ureter was enormously dilated, and showed complete dilatation down to the uretero-vesical junction. Although the kidney looked fairly normal from the surface, the cavity completely distended it (Fig. 5).

Five weeks later the child appeared to be quite well, the wound healed, the urine clear, containing no pus-cells, and sterile on cultivation.

The following lessons may be learnt from these two cases :

1. It is an obvious practice that in cases with relatively obscure symptoms all the tracts of the body must be carefully examined. The frequency with which a complete investigation of the urine is omitted, however, is curious, with the result that relatively minor degrees of infection are completely overlooked. The first case exemplifies this fact, for the patient has been labelled as a neurasthenic, and the relatively trivial abdominal

FIG. 5.

symptoms had been passed over ; as a result of the incorrect diagnosis she had lost her job, whereas there really was a definite and major cause for her troubles.

2. It is unwise to try the effect of medicinal or any other form of treatment in cases of chronic urinary infection without carrying out the necessary investigations which may discover a predisposing factor.

This statement may sound a little too wide, but let it remain so if only it will stimulate the carrying out of these procedures.

In my experience, there is a tendency amongst practitioners to be satisfied with the diagnosis of " infection of the urinary tract ", and to treat the patient

by some method, dietetic or medicinal, often fashionable at the moment, without making a proper effort to discover the origin of the infection or the presence of some defect of the urinary tract which keeps it up.

These remarks do not apply to acute infections of the urinary tract. They should, quite correctly, be treated by medicinal and dietetic methods, and many of them will completely clear up. Often, however, this fails; in these cases, and the chronic or recurrent cases, it is surprising how often some predisposing factor can be found if the seeking for it is sufficiently energetically pursued. By such a discovery many miserable lives can be made happy.

3. There are difficulties in the way, for the investigations called for are often laborious and extensive; moreover, the results obtained may be difficult to interpret.

The investigations required may be taken in the following order:

(*a*) *Examination of urine.*—It is quite clear that the nature of the micro-organism and its association with pus-formation is an essential finding of a full examination of the urine before the diagnosis of an infection can be made. It is not sufficient to guess that this is present by observing a "turbid urine with a fishy smell".

An accurate analysis of catheter specimens of urine is required. Normally passed urine is too often contaminated.

(*b*) *Radiography.*—A straight radiogram is essential to demonstrate or exclude the presence of calculi.

(*c*) *Cystoscopy.*—A cystoscopic examination is required to indicate the presence or absence of cystitis. Indications may thus be obtained as to whether it is associated with (i) intra-vesical lesions; (ii) prostatic or urethral lesions; or (iii) perivesical lesions.

If associated with upper urinary tract infections, the appearances of the urethral orifices may indicate the presence of a unilateral focus, which may be further confirmed, in gross infections, by the character of the efflux from the ureter.

(*d*) *Ureteric catheterization.*—Gross infections and the lesser degrees of turbid urine not seen by cystoscopy will be confirmed by ureteric catheterization.

(*e*) *Pyelographic examinations* are called for to demonstrate the presence or absence of predisposing lesions of the kidneys.

4. The ureteric catheterization in both cases was the means of discovering that a unilateral infection of the urinary tract was present.

5. It is not sufficiently appreciated that unilateral infections are fairly common, and that these are dependent on some inherent defect in the urinary passages. It is true that bilateral infections without any obvious predisposing cause are met with; others are associated with obvious causes, such as enlargement of the prostate, strictures of the urethra, renal calculi, etc. It is quite clear, however, that without these investigations the unilateral cases cannot be segregated, and many patients lead the lives of invalids for want of sufficient care in this direction.

6. Pyelography was the essential examination which led to the discovery of the deformities of the upper urinary passages.

The interpretation of the pictures obtained calls for some comment. Take the intravenous pyelograms. In the first case it was suggested that both kidneys were at fault; in fact, it was believed that the left kidney was really more likely to be the seat of the trouble than the right, and that the indefinite shadow shown in the right kidney was due to some defect in the concentration of the dye, which might be disregarded.

In the second case the dye did not concentrate in either kidney up to the full period allowed, and thus led to the suspicion that both kidneys were working inefficiently.

These interpretations, however, did not fit in with the findings of the ureteric catheterization, and therefore retrograde pyelography was resorted to.

In the first case the retrograde pyelogram of the left kidney showed that the pelvis, which appeared to be considerably dilated, was normal, or a little larger than normal; there is a possible explanation of this, namely, that because the right kidney was completely destroyed, there was some compensatory hypertrophy of the left. Secondly, a considerable hydronephrosis of the right kidney of the pelvic type was found, which was not at all clearly shown in the intravenous pyelogram.

The retrograde pyelograms in the child were of considerable importance, in that retrograde pyelography in a child of this age is not easily carried out. It was made possible by a technical detail recently discovered by my Chief Assistant, Mr. Underwood, which enabled us to get satisfactory pictures of both kidneys, showing gross dilatation of the right kidney and the ureter, with a normal left urinary tract.

The different outlook suggested by these observations, which more closely fitted in with that of the previous examinations, must necessarily teach us that uroselectan pyelography does not always give accurate information, and that the greatest care is required in the interpretation of the pictures obtained by this method. The method may serve as a valuable indicator

in suggesting which kidney is at fault, when neither gives sufficient evidence of its troubles by symptoms or ordinary physical signs, or which side of the urinary tract requires further investigation; but it must not at present be regarded as a procedure which replaces the retrograde method. Many pitfalls await those who rely on it. It is not an uncommon experience, for example, that normal kidneys fail to concentrate the dye; it must be recognized that the absence of shadows does not always mean that the kidney is not functioning properly. Thus, it follows that in every case of doubt it is essential for the appearances seen to be confirmed by ureteric catheterization and retrograde pyelography. Take another point: It is important to have some knowledge of the capacity of the renal pelvis, as this is the only way of discovering whether a minor degree of hydronephrosis is present. This can only be estimated by the retrograde method. The appearance of the intravenous radiogram may, as in the first case, suggest the presence of a dilated pelvis, quite wrongly. Unless the amount of fluid held by the pelvis is estimated, the diagnosis may be faulty.

From the patient's point of view intravenous pyelography has one advantage, namely, that a cystoscopic examination is avoided; this is a procedure which is feared by so many, and requires a specialist to carry it out. This warning, with regard to intravenous pyelography, therefore, is necessary if the method, at the moment fashionable and valuable in some cases, is not to fall into disrepute.

7. These two cases are allied in that they both show the pelvic type of hydronephrosis; in the child it was associated with a hydro-ureter. They are commoner lesions than is generally realized; their origin is obscure, but there is some reason for believing that they have a congenital origin. There is no need to discuss their pathology here.

The point which requires to be emphasized is that these minor degrees of hydronephrosis, not sufficiently large to give rise to physical signs on abdominal examination, cannot be discovered except by pyelography.

8. In both cases the kidneys were removed, and the findings are described in the records. The question of treatment will not be further considered. In passing, however, it is just worth mentioning that it is for this type of case that lumbar sympathectomy and ganglionectomy is advocated by some. It is hard to conceive that sympathectomy could do any permanent good in such cases, for apart from the infection, there is generally an absence or great diminution of renal tissue.

9. It is worth indicating that an investigation of the urinary tract is not all that may be required in these cases of infection. The predisposing factor may be outside the urinary tract. Here is the record of one further instructive case to illustrate this point:

A woman was admitted to the hospital some years ago with an infection of her urinary tract and severe painless hæmaturia. The infection was regarded as the cause of the bleeding, and medicinal treatment was first advocated. The hæmaturia, however, became so severe that her red blood-cells fell to 2,300,000 per c.mm. and the hæmoglobin to 30%. It was shown that the blood was coming from her right ureteric orifice and that the infected urine was coming from the right kidney, whereas the urine from the left side was sterile.

A retrograde pyelogram was made, which showed a very mild dilatation of the renal pelvis.

The hæmaturia was so severe that it was decided to remove the kidney, which otherwise might have been dealt with by some palliative procedure, such as nephropexy. On section the kidney was found to be quire normal, and the source of the hæmaturia did not appear to be in the kidney, which was proven by the fact that on the next morning the urine still contained blood and the infection remained.

The bleeding slowly subsided, and the patient went to a convalescent home, where she developed an attack of acute appendicitis, symptoms of which she had never previously had. At the same time she had a marked infection of her urine.

She was brought back to the hospital and her appendix was removed. It was gangrenous, and was adherent to the stump of the ureter, which had been left behind. Within three days of the removal of the appendix the urine was sterile and has remained so ever since.

There is no doubt that the infection in this case was caused by the adhesion of an inflamed appendix to the urinary tract.

10. Enough has been said to show that with sufficient care, and that with these possibilities in mind, the origin of a urinary infection is always worth looking for.

Our motto should be that instead of trying palliative treatment first, give complete investigation and thereby accurate diagnosis a chance.

W. GIRLING BALL.

THE ADMINISTRATION OF ANALGESIA IN LABOUR BY MEANS OF DR. MINNITT'S GAS AND AIR APPARATUS.

AT the Wellhouse Hospital, Barnet, during the past winter months I have had the very great privilege of supervising the administration of nitrous oxide and air to 100 maternity cases, all of whom made use of the Minnitt gas and air machine for self-administration of analgesia in labour.

Dr. Minnitt, the inventor, and Mr. Charles King, the manufacturer, very kindly placed two machines at our disposal, so that we were able to form a very good opinion as to the advantages and possibilities of this means of self-administration of analgesia in maternity work.

The Medical Superintendent of the Wellhouse Hospital insisted that any method for giving analgesia in maternity work at this hospital must fulfil certain conditions:

(1) The patient must be given satisfactory relief from pain.

(2) The method in use must be helpful to the midwife or nurse, and must not hinder her in her work in any way. (For example, excitement of the patient and cyanosis of the baby had to be absolutely avoided.)

(3) The apparatus in use must be simple to use and quite "fool-proof".

(4) Absolute safety was required.

(5) Normal labour must be in no way interfered with.

(6) The method had to be one which could be used without constant medical supervision.

(7) Undue expense had to be avoided.

Any process which did not in every respect come up to this standard of excellence was of no value, and would be discontinued immediately.

The various methods for maternity analgesia which had been in use at other hospitals and institutions did not appear altogether satisfactory, and it was evident that there was ample scope for new apparatus and new technique.

It did, however, appear that the method advocated by Dr. Minnitt might be a very great advance on anything we had seen up to the time of our investigation.

I was therefore invited to supervise in a voluntary and research capacity, under the direction of the Medical Superintendent, a series of maternity cases to be given gas and air analgesia by means of Dr. Minnitt's machine.

Only those patients who were in labour between 8 a.m. and 10 p.m. were to receive the gas and air.

The results of our investigation have not only proved most satisfactory, but have exceeded our expectations in many ways, and, as this method which we have used is not generally known, I think that it may be of interest to Bartholomew's men to hear something of our experiences.

A report on the results of our first 64 cases was read at the Liverpool Medical Institute by Dr. Minnitt on February 22nd, 1934, together with his own report on a longer series of cases attended at the Liverpool Maternity Hospital.

I think that the results of the investigation do show that the method of Dr. Minnitt is one eminently suitable for the maternity work of general practice. There is no difficult technique, and we have the enormous advantage that there is no necessity for the presence of a highly skilled anæsthetist experienced in maternity work.

This is of the greatest importance both in hospital and private practice.

Dr. Minnitt's machine is similar to the nitrous oxide half of McKesson's machine, with a device for allowing a definite proportion of air to be mixed with the gas.

For this purpose there are five air-holes on the top of the machine. With all these five air-holes open, the machine delivers about 35% nitrous oxide in air.

The weight of the machine is 7½ lb. without cylinders, and the amount of gas consumed is, on a fair average, 35 gallons per hour (intermittent flow).

In all, 100 women were given gas and air in their confinements between November 4th, 1933, and March 22nd, 1934, at the Wellhouse Hospital.

There were 58 primiparæ and 42 multiparæ in this series, and of these, 16 primiparæ and 24 multiparæ found *great relief*; 42 primiparæ and 16 multiparæ felt *no pain whatsoever*; 2 found *some relief* after the gas and air was started. By *great relief* I mean that there was complete absence of evidence of distress during labour, and that the patients themselves subsequently stated that the method had given them great relief from pain.

52 primiparæ and 41 multiparæ made use of the apparatus up to and including delivery; 6 primiparæ and 1 multipara until delivered under general anæsthesia (6 forceps cases and 1 breech).

There were 3 breech cases delivered under gas and air.

There were 2 stillbirths, but these were not due to the gas and air. One was a difficult forceps delivery, and one gave no fœtal heart-sounds long before delivery. This latter was sent to hospital as a specially difficult case.

Length of time during which gas was given varied from 10 minutes to 14 hours.

The most important advantage of this method is that the analgesia is self-administered, and that the patient does not lose consciousness and can co-operate with the accoucheur, the machine being automatic in action. This advantage has been particularly stressed by the patients themselves. They find great satisfaction in that they are relieved of their pain, yet remain conscious of their surroundings and are aware of the presence of the sister in charge.

No premedication was given to patients immediately prior to the administration of the gas, although a few had had morphia some hours earlier.

Every patient in her own handwriting recorded her opinion of the method, and no attempt was made to influence her in any way.

There was no selection of cases; these were taken as they came.

The administration of gas and air was usually started at about full dilatation of the cervix. Owing to my being a non-resident anæsthetist there were a few very

short administrations, as I could not always get to the hospital as promptly as I could have wished.

For the first 50 cases I was actually present for the entire time during which gas and air was administered, but as the series progressed, the supervision was left more to the nursing staff, until it was thought that they might, with safety, take entire charge.

Towards the end of the series the nursing staff showed that they were perfectly capable of dealing with a case entirely "on their own", their results being quite as satisfactory as those I had obtained.

They were, of course, in an advantageous position in that they could, at a moment's notice, summon medical assistance if required, but they showed great enthusiasm in their work and assisted me to their utmost.

In no case did they require medical assistance for any reason connected with the administration of gas and air.

Now there are certain difficulties and objections which seem to have been inseparable from the use of nitrous oxide analgesia in labour up to the present.

These may be briefly enumerated:

(1) The cost and weight of apparatus required.

(2) The presence of a skilled anæsthetist at the bedside of the patient for a prolonged period.

(3) Except in highly skilled hands, possible cyanosis of the baby.

(4) Excitement of the mother.

(5) Vomiting.

We must therefore consider whether these apply to the use of Dr. Minnitt's machine.

(1) The cost and weight of apparatus: The machine without cylinders weighs 7½ lb., and the cost, so far as one is able to judge at present, will not be prohibitive.

(2) The method is truly described as self-administrative. The patient is given the face-piece and told to apply it to her face and breathe in and out when a pain comes. Any fairly intelligent woman will do this, and there is no necessity for the presence of a skilled anæsthetist.

In the writer's opinion the supervision of the administration can well be left to a nurse after very brief instruction.

(3) When the patient is breathing regularly in and out through the face-piece, cyanosis does not occur.

When, however, she holds her breath and pushes down in the second stage of labour, cyanosis did occur in a few cases in our series.

This was not of a serious or dangerous degree, and was overcome by telling the patient to stop pushing and take a deep breath, which she invariably did.

The cyanosis which was observed had no ill-effect whatever on the babies, as all these cried lustily on being born. There were no blue babies.

(4) Excitement was notably absent, and it was remarked that, in many cases where the patient had been very troublesome before the analgesia was started, all excitement disappeared.

The nurses were of the opinion that the patients having gas and air were much more easy to control than those having no analgesia.

To my mind the most important advantage of this method is that it not only helps the patient, but helps the nurse also.

(5) In our series vomiting only occurred in two cases, one of which had had a general anæsthetic a few hours previous to the gas and air.

None of the other patients complained of nausea or vomiting, and most took fluids during the administration, between the pains.

We must therefore come to the conclusion that Dr. Minnitt's machine gives us a method for the relief of pain in maternity work, which has most of the now well-known advantages of nitrous-oxide-oxygen technique without its disadvantages.

At the present time gas and air has not been found to give sufficient depth of anæsthesia for the application of forceps or for extensive repairs to the perinæum, although it does suffice for the insertion of one or two stitches into the perinæum.

We are as yet at the beginning of a road—perhaps it may be a long road—which will lead to analgesia in labour for all women.

But we must all be most grateful to Dr. Minnitt for having shown us what great advantages and possibilities lie in the use of nitrous oxide and air analgesia in labour.

Finally, I would pay tribute to the Medical Superintendent and the nursing staff of the Wellhouse Hospital for all their encouragement and support.

Throughout the investigation I was in constant touch with Dr. Minnitt, who gave us much assistance and advice.

JOHN ELAM.

RHYME.

Mary has a little cup
And very rightly crows;
I much regret to tell in verse
What should be told in pros.

PINK DISEASE.

FIRST described in 1903 by Selter in Germany, this rather uncommon disease of infancy has now earned its place as a recognizable disorder of world-wide occurrence. That it still remains in some degree of obscurity is to be attributed partly to the fact that recovery is usual, and so the morbid anatomy of the disease has been studied by only a few observers, and partly to the peculiar difficulties associated with the diagnosis and investigation of disease in infants. Since its original description, no fewer than seventeen names and methods of description have been bestowed upon it by various authors, but the titles of "pink disease" and "erythrœdema polyneuritis" are the usually accepted ones in English medicine. Because it is believed that the disease is less uncommon than is usually thought to be the case, this brief paper deals with the disease as a whole, especially as exemplified by two recent cases studied in the Children's ward of this hospital.

CLINICAL FEATURES.

Pink disease is so called because a frequent and peculiarly striking manifestation of it is a pink colour of the hands and feet, but it is to be realized at the outset that this is but one feature of a disease characterized by a varied symptomatology with several clinical types.

The age-incidence is strictly limited to the period of infancy, most cases occurring between the ages of 9 and 18 months. This striking age limitation brings pink disease into the same age-group as infantile rickets —a fact which may eventually prove to have a bearing upon the ætiology of the disorder. There is no special incidence in either sex.

The disease commences insidiously, there being often a history of a febrile illness—a cold or an attack of "influenza", following which is a quiescent period of a few weeks, and then a gradual unfolding of the clinical picture. Case 1 will illustrate the usual clinical type:

CASE 1.—J. H—, a female breast-fed infant, developed normally until the age of eight months, when she was noticed to be becoming irritable. There was constant crying, and she lay in her cot without making any effort to support herself. Gradually feeding became difficult, the breast being refused, and in consequence weight was lost. Muscular weakness increased, so that she lay listlessly, though there were continual movements of the hands and feet. At the age of nine months the latter were observed to be unduly pink, and the skin appeared to be peeling off. A nasal discharge had been noticed shortly after the onset of the disease and had persisted. When seen at the age of 9½ months the child presented a characteristic picture, lying curled up in her cot with an expression of extreme misery on her face. She would cry and scream frequently, especially when fed or washed. At this time she weighed only 14 lb. 3 oz., and was still losing weight on admission, great difficulty being experienced in getting her to take her feeds. There was slight irregular fever of the order of 99·5°–100° and tachycardia up to 160, but the striking clinical features were the irritability, the anorexia, muscular weakness, and the condition of the hands and feet. The muscles of the limbs were extremely flabby and the tone poor, but the tendon reflexes were all obtained. The hands and feet exactly resembled the classical description of "looking as though they had been dipped in boiling water". The hands were particularly affected, and appeared puffy and red, while the skin was peeling off in large flakes. They always felt cold to the touch. Response to pin-prick was diminished over a wide area of the arms and legs, the hands appearing anæsthetic. Elsewhere the skin was normal on admission, though rather clammy, but at intervals while under observation a fine papular "sweat rash" appeared on the trunk and limbs. Finally, a degree of stomatitis was present, the frenulum linguæ being ulcerated.

The above state persisted for the first fortnight and then diarrhœa set in, while fever increased in degree. By adjusting the feed from sweet cow's milk to lactic acid milk this was checked, and clinical improvement then set in, the weight steadily increased, and on discharge, at the age of 12 months, she was apparently well, though the hands were still pink and she was still rather irritable.

This patient presented a picture so characteristic that the diagnosis of pink disease could be made on sight, yet there were several clinical features often seen in pink disease which she did not exhibit. Thus, insomnia, resistant to hypnotics, is often present, while there may be photophobia. Then the tendon reflexes are frequently greatly diminished or absent. The stomatitis was of a mild degree in this case, but is often severe, the teeth becoming loosened and falling out. Often the child has not only pink hands and feet, but a pink nose, and the latter seems to irritate so that the subject burrows with its nose in the pillow. The hair may be affected and may fall out. Case 2 illustrates the occurrence of the same disorder of general health with a relative absence of change in the hands and feet.

CASE 2.—G. F—, a female infant, developed normally and was breast-fed until the age of 9 months, when she had "influenza", and following this great difficulty with her feeding was experienced. Bottle-feeding was attempted, but milk was spat out as soon as it had been taken. Irritability and screaming attacks developed, and the neck seemed to be stiff. She made no effort to sit up or raise her head, and no interest was taken in her surroundings. On admission, at the age of 12 months, the child was found to be exceedingly irritable and miserable, with a profuse, purulent nasal discharge. The latter was examined for Klebs-Loëffler bacilli, but only staphylococci were cultured. In general she lay quietly curled up in her cot away from the light, but she screamed if anyone went near her. Sleep was fitful and disturbed, but hypnotics were not needed. There was slight irregular fever as in Case 1, and the tachycardia was even more marked (160–180), the sleeping pulse being 160. Because of the history and general clinical aspect a provisional diagnosis of tuberculous meningitis was made, but no demonstrable change existed in the cerebro-spinal fluid. After two weeks of observation the child was worse; she had lost weight, her muscles were extremely wasted and flabby, and the tachycardia was as persistent as ever, when one day she was seen to be rubbing her hands and feet together as though they itched. At this time there was no rash or change in the appearance of the hands and feet, but later a fine papular rash appeared on the trunk and this became persistently clammy. The palms of the hands also took on a sodden appearance and the rubbing movements continued. Stomatitis appeared, the buccal mucosa being red and ulcerated. The blood-pressure was taken at this time and found to be raised—140/100. She remained in much the same state, at times gaining weight and then losing her gain with disappointing rapidity. Three months after admission, at the age of 15 months, she weighed only 17 lb. 8 oz., and was so weak that if placed with her head between her knees, she remained helpless, unable to move. For some weeks the knee-jerks were not obtained, but they soon reappeared, while no change

was demonstrated in the response to pin-prick. Finally, five months after admission, she began to take her feeds better, her muscles slowly became firmer and stronger, and she sat up and took an interest in her surroundings. Even on discharge she was still rather irritable and difficult to feed. Special investigations during the period of observation revealed a normal blood picture and serum calcium, a negative Wassermann reaction, a normal electrocardiogram (apart from sinus tachycardia), but a definitely raised sedimentation rate (21 millimetres instead of the normal 10 millimetres).

Here, then, is a case which presented at one time or another all the features of pink disease, though the hands and feet were never pink or anæsthetic. Yet the course of the disease leaves little doubt that this case was one of pink disease.

To summarize the clinical features, there is first and foremost the characteristic mental attitude of misery and irritability, while photophobia and insomnia are often present. There is muscular weakness and hypotonia, often with absent tendon reflexes. The hands, feet and nose are pink and appear to irritate, while areas of anæsthesia may be demonstrated on the limbs. There is constant anorexia with stomatitis, and perhaps periods of diarrhœa and vomiting. Tachycardia, frequently hyperpiesis, an irregular fever of low grade, marked sweating resulting in a mousy odour, a fine papular eruption and nasal discharge complete the list. In the blood a polymorphonuclear leucocytosis may be present.

Finally, the long course of the illness, with its many ups and downs, usually with eventual recovery, but sometimes sudden death or death from bronchopneumonia, or enteritis, complete the clinical aspect of this disease.

Morbid Anatomy and Ætiology.

Paterson and Greenfield (1), in a description of two fatal cases, demonstrated that pink disease is essentially a disease of the nervous system. There is a demyelination of the peripheral nerves, a chromatolysis of the anterior horn-cells of the lumbar and cervical enlargements of the cord, and a small-celled infiltration of the grey matter of the cord. Wyllie and Stern (2), with seven fatal cases, have confirmed these findings. In one of their cases, dying suddenly after only a short illness, there was a demyelination of the vagus. They were unable to demonstrate any constant change in the brain. Francioni and Vigi (3) claimed to have discovered lesions in the sympathetic system, but their case also showed lesions typical of epidemic encephalitis.

Other authors, notably Lereboullet (4), claim that there is definite evidence of an encephalitis involving especially the subthalamus and so causing an upset of the sympathetic system. It may be accepted that there is a peripheral neuritis and a myelitis in pink disease, though whether there is an encephalitis or not is yet unproved. A dysfunction of the sympathetic system is a convenient explanation of the trophic changes, which are such a feature of this disorder.

To embark on a consideration of the ætiology at once leads into the realm of theory. Of the chief theories, the infective one, which implies infection with a neurotic virus, is most widely accepted at present. The nasal discharge suggests a localization of the site of invasion to the nose or nasopharynx, which is known to be the site favoured by other neurotropic viruses, notably poliomyelitis and epidemic encephalitis. Other features supporting an infective origin are the fever, the tachycardia and the polymorphonuclear leucocytosis. The raised sedimentation rate in Case 2 may be noted in passing.

The other main theory is the nutritional one. This theory originated in Findlay and Stern's (5) work on a nutritional disorder of rats characterized by epidermal changes and produced by feeding on egg-white. If pink disease is a deficiency disease, then the deficient factor is not one of any of the factors at present recognized as necessary for normal nutrition. Pellagra is somewhat like pink disease in presenting a combination of alimentary, nervous and integumentary symptoms, but there are many differences, of which one most striking is the lack of excessive pigmentation in pink disease. Of the other views which have been put forward from time to time none bear scrutiny. The recent suggestion by Braithwaite (6) that excessive exposure to ultra-violet light is concerned in the ætiology is counterbalanced by the favourable results reported by other observers (Sweet (7)) of treatment with ultra-violet light irradiation.

Treatment.

With the inadequate knowledge possessed at present of the nature of this disease treatment can only be empirical. The best that can be done is to promote an adequate calorie and vitamin intake, and because of the anorexia and irritability, this depends greatly on the nursing of the infant. Thus, Case 2 would take her bottle quite well after some few weeks in the ward, but required much persuasion, and she utterly refused to take from strangers. In addition to the milk feeds usual at this age, radiostoleum, bemax and orange-juice should be given to supply the necessary vitamins. Liver extract was administered for a prolonged period to Case 2, without any beneficial effect being observed (Wyllie and Stern (2) have claimed good results with raw liver).

Both the cases reported were given blood transfusions, with benefit in Case 1, but without marked effect in Case 2.

CONCLUSIONS.

This brief account of pink disease is promoted by the belief that cases of this disorder are frequently missed, and that only acquaintance with the variable clinical picture will lead to more accurate diagnosis. Further observation and experiment is still necessary before a rational therapy can be instituted.

My thanks are due to Dr. Charles F. Harris for permission to publish the two cases.

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C. H. STUART-HARRIS.

THE MAN WHO WAS NEARLY A DOCTOR.

(*With apologies to Bernard Darwin.*)

THE blackness and horror of the east wind had given place to the warmth of a summer. The rampagiousness of the elements no more provided the excuse for an evening by a large and cheerful fire, with a novel as his first choice and *Aids to Pathology* as his second.

So he turned once again towards Damocles—or a Board of Examiners and Pathology—and struggled to get ready once more. He knew they would show him a bottle, and he had piously resigned himself to prepare for it by pursuing with iron self-control the series of specimens that belonged to the teaching collection. He glimpsed just waywardly at the array of victim examples of this and that, which were to pass for ever with the dust of the week's spring-cleaning in the Museum. He would have liked to eye them for the last time, partly for the satisfaction of knowing that he need not interpret them, and partly because they could never be used by the enemy, if only because the enemy, like everyone else, would surely have mistaken their identity.

Perchance they would show him also the difficulties of the unknown down a microscope, and he had learnt to his cost already that it was better to describe what he saw, unwitting as he was of its nature, than to imagine he could tell what it was and describe, as he thought, its appearance—because he was a "chronic" by now, and one of those really unlucky people against whom one can only suppose that the enemy had a personal spite. And it worried him more than a little, because the end was quite nearly in sight. He had only to win just once and then he could rest content. He had only to prove once again to that Board that they could start by assuming him to be a zany, but end by discovering he was not.

He had dreamt, before the last encounter in medicine, more than once of a figure—lordotic perhaps—which inquired, "Precisely what do you mean by some medicine for his cough?". He had learnt to spell, even in Latin; he had versed himself in the ghastly and scurrilous procedures for which he might be assailed, if ever he got into practice. And this time he had much less to do; but the gunpowder of his enthusiasm had almost run out of the heels of his boots.

And then the great day came, and for the first few moments there came from his lips a flow of eloquent wisdom that made the enemy wonder how it was possible from such a decrepit frame. But the storm was to follow—and bottles and slides, as usual quite unlike anything he had ever beheld. Nevertheless he weathered it, and the bell was nearly upon him when the last chance came. He had to look down the microscope once again, but this time, for a change, he knew what it was; and with the courage of his convictions he triumphantly declared carcinoma. . . . But what was a carcinoma? And of what? . . . And he muttered and stared; but still he didn't just know. So Greek was the stumbling-block this time, but, of course, he had never been privileged to learn it at school. "Precisely what do you mean by the word carcinoma?" was all he heard before the bell rang clearly and as dramatically as if it summoned him like King Duncan's knell. He walked out into the street, and there was a crowd collected round the victim of a motoring accident. . . . Was there a doctor in the crowd, someone asked? But then he could stand no more; so he turned quickly away, and muttered to himself as consolation, "But what is victory or defeat compared with education?".

"FLETCHER."

OVARIAN TERATOMATA: A REPORT OF THREE UNUSUAL CASES.

TERATOMA of the ovary may be either cystic, in which case it is commonly referred to as a "dermoid cyst", or solid.

The cystic teratomata are innocent tumours, forming about 10% of all ovarian cysts. A dermoid process, projecting into the cavity of the cyst, is the centre of activity of the tumour, often containing tissues representative of all three embryonic cell layers, and is thus truly teratomatous, being an abortive attempt at the formation of the cephalic extremity of the embryo (1). Bland-Sutton (2) suggests that these tumours might be not inaptly called "fatherless embryos". In rare cases a malignant change develops in one of the tissue elements of the dermoid process (Case 1).

The solid teratomata are rare tumours, considered by most pathologists to be primarily malignant (Cases 2 and 3).

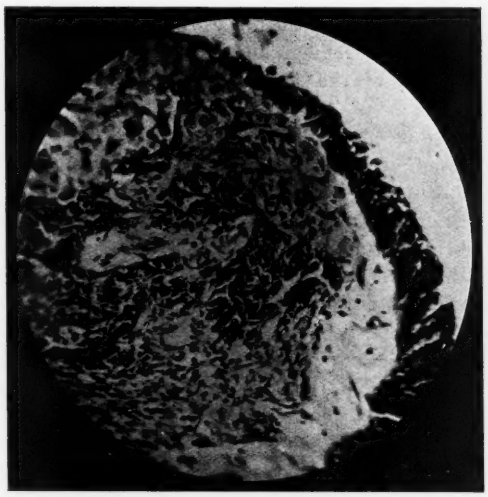

FIG. 1. × 125.

CASE 1.—*Squamous-celled Carcinoma Developing in a "Dermoid Cyst" of the Ovary.*

A housewife, æt. 59, who first came to St. Bartholomew's Hospital on November 29th, 1933, complaining of "difficulty in passing her water".

Menstrual history.—Regular periods until the menopause fourteen years ago.

Obstetrical history.—One pregnancy, with a living full-term child, nineteen years ago.

History of present condition.—Three to four months' increasing abdominal enlargement. Six weeks' delay in starting micturition, with pain and a poor flow of urine; symptoms becoming progressively worse. No increased frequency of micturition and no incontinence. Gradual onset of constipation. No abdominal pain; no vaginal discharge.

On examination.—Thin, ill-looking woman. Abdomen: Visible distension of hypogastrium. Palpable cystic swelling rising out of the pelvis to within about 2 in. of the umbilicus, with a more solid portion to the left. Well defined, fixed and not tender. No ascites and no other viscus palpable.

Vaginal examination.—Cervix lay high up and displaced forward. Uterus displaced to the left; enlarged to twice normal size and fixed. Fixed, cystic swelling to the right of the uterus and extending into the pouch of Douglas. No nodules palpable. There was no œdema of the legs. Urine: Nothing abnormal discovered.

Diagnosis.—Malignant ovarian cyst.

Operation, December 14th, 1933, by Dr. Wilfred Shaw, under gas, oxygen and ether anæsthesia. Low left paramedian incision. A large, lobulated, cystic tumour filled the pelvis. It was fixed to the back of the uterus and extended to the right side of the pouch of Douglas. Anteriorly the bladder was adherent, but was easily stripped off.

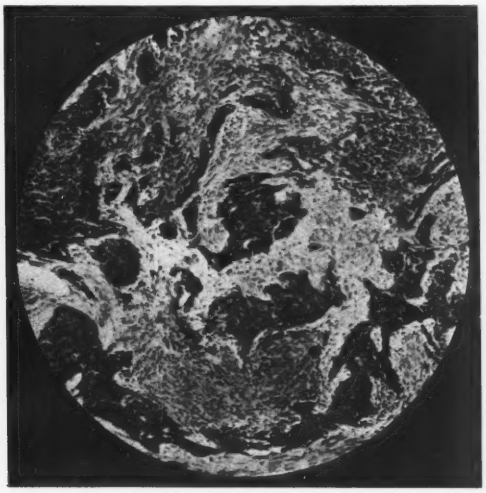

FIG. 2. × 60.

Panhysterectomy was performed, and the cyst removed whole, together with the uterus. A mass of friable necrotic tissue infiltrating the uterus partly tore through during the removal. No nodules could be felt in the abdomen.

Convalescence was uninterrupted.

Deep X-ray therapy, January 1st to 19th, 1934. Sixteen doses in all through anterior and posterior fields. 200% of unit skin dose, equivalent to one erythema dose over the period stated. Rays were produced by 200 kilovolts and filtered by a Thoraus filter.

Further progress, March 15th (three months after operation). —Patient felt well. Weight was about stationary. No micturition symptoms. Good scar. No evidence of recurrence.

Pathology.—The specimen removed at operation consisted of a large cyst, 8 in. by 8 in., adherent by a mass of friable tissue to the posterior aspect of the uterus; the lower half of the uterus and the right tube and ovary appeared normal.

The cyst contained sebaceous material and hair. It was thin-walled, except for several papillary processes projecting from one area into the cyst cavity. One of these processes was friable and continuous with the necrotic tissue invading the uterus.

Histology.—A squamous-celled carcinoma developing from the squamous-cell lining of the cyst (Fig. 1), and infiltrating the connective-tissue stroma of the cyst-wall and the back of the body of the uterus. There was much necrosis in the central areas of growth (Fig. 2).

CASE 2.—*Solid Teratoma in the Wall of a Pseudomucinous Cyst.*

Married woman, æt. 34, admitted to St. Bartholomew's Hospital on February 12th, 1934, complaining of pain in the left side and swelling of the abdomen.

Menstrual history.—Regular periods every month, lasting three days, commencing at the age of 17. No pain.

Obstetrical history.—Two pregnancies: (1) 6½ months, stillborn; (2) normal four years ago; child alive and well.

History of present condition.—Five weeks' increasing enlargement of abdomen. Three weeks' gnawing pain in left side. No vaginal discharge. Feels well herself. Micturition natural. Bowels open regularly.

Past history.—1922: W.R. +++. 1930: W.R. −.

On examination.—Healthy-looking woman. Abdomen: Generally distended, especially below umbilicus. Swelling arising from pelvis; cystic, with harder areas, tender; resonant in flanks. No viscera felt. No œdema of legs.

Vaginal examination.—Cervix is high, looking downwards and backwards, softened and patulous. The swelling is not continuous with the cervix. Urine: Nothing abnormal discovered.

X-ray showed a large swelling in the mid-line of the lower abdomen, displacing the intestines upwards and posteriorly. Numerous areas of calcification were seen in the swelling, some of which could represent dental elements.

Diagnosis.—Dermoid cyst.

Operation, February 14th, 1934, by Mr. Beattie, under general anæsthesia. A large cyst was found to have burrowed between the layers of the broad ligament. There was considerable difficulty in separating it. The cyst was aspirated and removed whole.

Convalescence was uncomplicated, and the patient was discharged on March 3rd.

Pathology.—The tumour consisted of a multilocular pseudomucinous cyst, in one area of which was situated a partly solid, partly cystic mass, amongst which hair, teeth and pieces of bone could be identified. The solid irregular mass measured about 6 in. across.

Histology.—Epithelial structures, forming multiple small cysts and glandular acini and areas of cartilage, lay in a cellular connective-tissue stroma. There was no evidence of malignancy.

CASE 3.—*Solid Teratoma.*

Girl, æt. 12, was admitted to St. Bartholomew's Hospital on March 16th, 1934, complaining of a painful lump in her abdomen.

She had never menstruated.

History of the present condition.—One week, lump in her abdomen, not noticeably growing in size. Six days' pain in the abdomen, with occasional sharp exacerbations; not severe. Micturition was natural and bowels opened regularly. General health good; played games at school.

On examination.—Rather pale, but healthy-looking girl. Abdomen: Visible swelling in mid-line below umbilicus; no rigidity; no tenderness. Palpable pear-shaped swelling rising out of the pelvis, reaching to the umbilicus, about 4 in. in diameter; firm, smooth and solid; mobile laterally, but not vertically. No viscus palpable.

Rectal examination.—Cervix high up and hard. The swelling moved apart from the cervix. Small uterus loosely attached to the under-surface of the tumour. Urine: Nothing abnormal found. No œdema of the legs.

Operation, March 20th, 1934, by Mr. Beattie, under gas, oxygen and ether anæsthesia. Left sub-umbilical paramedian incision.

The tumour, which filled the lower abdomen, was found to be solid. It was adherent by some old blood-clot to the rectum, but was easily removed whole. The right ovary appeared normal.

Convalescence was uncomplicated, and patient was discharged on April 7th, 1934.

Pathology.—The tumour consisted of a spherical mass, 4 in. in diameter, which was honey-combed in appearance and contained fragments of bone and cartilage.

Histology.—Epiblastic and mesoblastic tissues were recognized, but there was no evidence of malignancy.

It is interesting to note that in both Cases 2 and 3 the history is a short one, especially in Case 3, yet the tumours were large in size. In neither of these cases was there any histological evidence of malignancy.

COMMENT.

The development of malignancy in a dermoid cyst of the ovary occurs in from 0·5 to 5·0% (3) of cases, only those being considered in which the change actually began in one of the tissue elements of the dermoid cyst itself. Although squamous-celled carcinoma is by far the commonest type, adenocarcinoma, sarcoma and endothelioma have been described.

In 1928 Masson and Ochsenhirt (3) reviewed the literature, and could find only 33 authentic cases of squamous-celled carcinoma arising primarily in a dermoid cyst of the ovary; to these they added 3 cases of their own. More recently cases have been reported by Deaver (4), Tedenat (5) and others (6), one of which (6) was remarkable for the very rapid and widespread dissemination. One specimen from a recent case is in the Museum of the Royal College of Surgeons (No. 8383 i).

The age of onset varies from 20 to 66 years, with an average of about 49 years. The symptoms are not typical, but pain, rather rapid abdominal swelling and micturition dysfunction are the most common.

Unfortunately the prognosis is grave, and death usually follows within two or three years of operation. Cases of five years' survival and of death from metastases after seven years are reported (3, 5).

The association of dermoid cysts with pseudomucinous cysts of the ovary is well known, but the combination of a solid teratoma and a pseudomucinous cystadenoma must be very uncommon. It has been suggested (7) that the two cysts "formed part of an original tumour", and that one area of the dermoid differentiated itself into a pseudomucinous cyst. It is interesting to note, therefore, that in Case 2, a histologically innocent but solid teratoma grew in the wall of a pseudomucinous cyst. In fact this case appears to link up the cystic and solid teratomata, combining some of the chief characteristics of each.

Bland-Sutton's description of solid teratomata can hardly be bettered: "Malignant ovarian teratomata occur in girls and young women as solid or semi-solid tumours, and rarely attract attention until an increase in the size of the abdomen is noticed by the patient or her relatives. The tumour grows quickly, disseminates like cancer, recurs very rapidly after removal, and destroys life in a few weeks or months." Recurrence and dissemination may take various forms; either the whole teratoma is malignant, giving rise to metastases of mixed tissues, or one type of cell only is malignant, giving rise to carcinomatous or sarcomatous metastases, usually the latter (8).

The prognosis is probably not always as hopeless as

Bland-Sutton suggests. Shaw (7) has reported a case well after five years, and quotes figures giving a four-year survival-rate of 25%. He examined four specimens of solid teratoma, of which only two showed signs of malignancy, in each case taking the form of a sarcoma. Recently Sarma (9) has reviewed the literature, and reported the case of a patient, æt. 5, who died with extensive metastases and local recurrence seventeen months after the removal of an encapsulated tumour. He came to the conclusion that all solid teratomata should be regarded as potentially malignant, even if histologically innocent.

I am greatly indebted to Dr. Wilfred Shaw and to Mr. Beattie for their permission to publish these cases, and wish to thank them for their assistance.

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E. B. Z. MASTERMAN.

TESTICULAR TERATOMA: A REPORT OF AN UNUSUAL CASE.

" I see thee what thou art,
For thou, the latest left of all my knights,
In whom should meet the offices of all,
Thou would'st betray me."
Tennyson, " Morte D'Arthur ".

JUSTIFICATION for recording this single case of a surgical condition so well recognized as new growth of the testicle,* lies in the occurrence of the unexpected at every stage of its history.

The patient, a married man, æt. 33, employed as a clerk, was admitted to Percivall Pott Ward on January 27th, 1934, complaining of swelling of the left testicle.

The patient's general physical and mental development had been perfectly normal. Until eight years ago, when he was 25 years of age, both testicles had remained in the inguinal canals beneath the superficial inguinal rings, and the right one had always been considerably smaller than the left. The left testis, then, over an uncertain period of months, descended spontaneously and completely into the scrotal sac. Six years ago the patient begat a healthy and normal male child; three and a half years ago the condition of the left testis was recorded as being natural. No other relevant incident occurred until five months ago, when he first noticed a painless swelling of the left testicle; two months ago he commenced to have a dull continuous ache at the neck of the scrotum on the left, and wore a suspensory bandage, which afforded some relief; the swelling gradually increased in size, and two weeks ago, when attending in the Follow-up Department of this Hospital after partial thyroidectomy, he called attention to the scrotal swelling. He had no cough, loss of appetite, abdominal discomfort, or symptoms referable to organic disease of the nervous system; his weight had shown a steady increase during the past three years

FIG. 1.—SECTION OF THE TUMOUR, SHOWING EPITHELIAL PEARL, SPINDLE-CELL STROMA AND SQUAMOUS-CELL CYST.

Additional past history was that he had first noticed symptoms of a diffuse toxic goitre six years ago, and the condition was treated three and a half years ago at this Hospital by a two-stage partial thyroidectomy; his general health returned to normal, and he was able to indulge in strenuous exercise, and his exophthalmos diminished considerably. There was no history indicative of venereal or tuberculous disease.

He was a well-built man, with a healthy complexion; his mental activity and distribution of body hair and fat was normal. General examination revealed no abnormality beyond slight prominence of the eyes and a mild degree of dental sepsis; his mucous membranes were of a good colour.

The local condition.—On the right side the scrotum was empty; the testis lay beneath the superficial inguinal ring, was of normal consistency, smaller than the normal adult testis, and testicular sensation could be elicited; the testis could not be displaced into the scrotum. Coughing revealed an abnormal impulse passing downwards and inwards along the canal to the neck of the scrotum, and easily controlled by one finger placed over the internal ring.

On the left side the skin of the scrotum was red, and the scrotal sac was occupied by an oval swelling about $3\frac{1}{2} \times 1\frac{1}{2} \times 2$ in., with its long axis perpendicular; the scrotal skin was freely movable over the swelling. The swelling itself was not tender, and had a smooth surface and firm consistency; it was well defined, and did not extend into the neck of the scrotum; fluctuation could be elicited on some parts of its surface only, but it was not translucent; testicular sensation was absent. The epididymis could not be

* The average number of cases of malignant disease of the testicle admitted to this hospital between 1923–33 has been six each year.

clearly distinguished. The spermatic cord was thickened, but its individual constituents could not be defined; an impulse, similar to that on the right side, was present on coughing, and extended into the neck of the scrotum.

Rectal examination revealed a normal prostate; there was no palpable abdominal tumour, no supraclavicular lymphatic gland enlargement and no indication of neoplastic metastasis elsewhere. The breasts were not enlarged.

A diagnosis of testicular neoplasm was made, and left orchidectomy was performed on January 30th; the contents of the left side of the scrotum were removed, together with the cord and patent funicular process, and the patient was discharged with the wound completely healed on February 11th; convalescence has since been uneventful, and the patient has returned to normal work.

Pathology.—The parietal and visceral layers of the tunica vaginalis were adherent in several places, and the vaginal sac contained a small amount of clear fluid. The tumour was well defined and the epididymis was distinct and separate, the sinus epididymis being

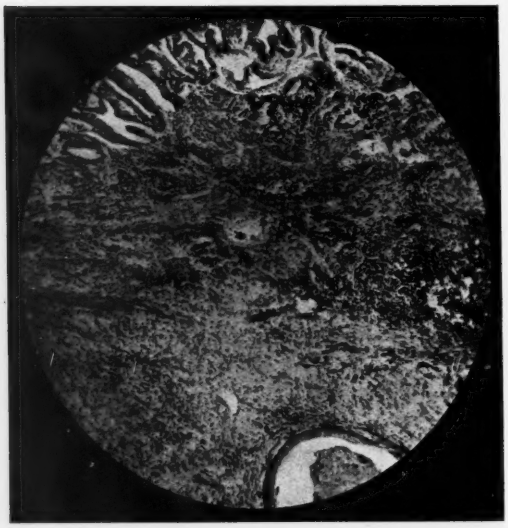

FIG. 2.—SECTION OF THE TUMOUR, SHOWING SMOOTH MUSCLE IN SPINDLE-CELL STROMA, AND COLUMNAR EPITHELIUM WITH MALIGNANT PROLIFERATION.

well marked. The surface of the tumour was smooth, and covered by a network of dilated veins; local fluctuation could be elicited at several places on the surface, but the general consistency was firm; the cut surface bulged from the encapsulating tunica albuginea, which was somewhat thickened; there was no evident remaining testicular tissue, but it was replaced by a lobulated tumour, each lobule consisting of a heterogeneous cream-coloured tissue with a fibrous stroma; there were numerous cysts, the largest being ½ in. in diameter; these cysts had opaque glistening walls and contained a gelatinous substance; there were also, scattered irregularly in the tumour, numerous hard, white bodies about 1 mm. diameter. Towards the posterior border of the tumour were several soft hæmorrhagic areas. There was lymphatic thickening in the cord, but no macroscopic deposit of growth.

Microscopic section showed that the bulk of the tumour consisted of spindle-shaped cells, with large hyperchromatic nuclei, and many blood-channels whose walls were devoid of epithelial lining, being formed merely by tumour-cells. Embedded in this stroma were smooth muscle-fibres, hyaline cartilage and epithelial pearls; there were also many cystic spaces lined by cubical or columnar epithelium. The tumour was thus triphyllic, there being elements derived from all three embryonal layers; both epithelial and mesoblastic elements exhibited malignant proliferation. There was no evidence of chorionic epitheliomatous tissue, the presence of which was suggested macroscopically by the hæmorrhagic areas, and the Ascheim-Zondek test was negative.

Pathological classification: Cairns (1), who regards all testicular neoplasms as teratomatous, in that they are derived from totipotent cells, whether isolated blastomeres or spermatocytes, classifies these neoplasms in five groups: (i) *Typical teratoma* (testicular dermoid), the main mass of which is a dermoid cyst containing sebaceous material, hairs, etc., and including in its wall a small embryonal element composed of various tridermal derivatives; (ii) *atypical teratoma*, which consists of a heterogeneous collection of differentiated and undifferentiated derivatives of all three layers, intimately mixed together; (iii) *chorion carcinoma*; (iv) *spheroidal-cell tumour* ("séminome", "spermatocytoma") (2); and (v) *combined types*, consisting of well-defined areas of atypical teratoma and of spheroidal-cell tumour.

The tumour under consideration here would be classified as an atypical teratoma.

Prognosis: This will depend upon the pathology of the tumour, and of the five groups, only the first, the "testicular dermoid", or typical teratoma, is benign; the atypical variety is characterized by a malignancy which may remain dormant for some time, either as primary or metastatic growth, and then flare up. The distant spread of these tumours may lead to simple "monophyllic" or complex teratomatous metastases (3).

Treatment: Surgery consists of either local orchidectomy, as performed in this case, or radical excision, including the whole length of the cord and the lumbar glands; the latter is a formidable operation, with a high ultimate mortality. The response of these tumours to irradiation is again dependent on their pathology, and the results of deep X-ray therapy, at this Hospital and elsewhere (4), have been good; the spheroidal-cell and chorion-carcinoma types respond very readily indeed in primary and metastatic form, but the atypical variety is less sensitive, the degree of sensitivity varying with the embryonal layer from which the predominant tissue is derived, and very large dosage may be required. After orchidectomy, although there may be no obvious gland involvement, prophylactic deep X-ray therapy for the lumbar glands is considered advisable, as recurrence otherwise appears to occur within one year.

COMMENTS.

The imperfectly descended testis has been the subject of innumerable monographs during recent decades, and it was the subject of the Hunterian Lecture in 1902 (5). Malignant disease of the testis has similarly been the centre of much discussion, and was the subject of the Hunterian Lecture in 1926 (1). The reputed tendency of the imperfectly descended testicle to undergo neoplastic change has likewise been a bone of contention, well chewed in every medical course, textbook and

monograph, on either imperfect descent or malignant disease of the male gonad; this bone, however, appears to have been laid aside, temporarily at any rate, by Russell Howard (6), who, after considerable experience in the matter, declares that the imperfectly descended organ has no special tendency to neoplastic change.

The spontaneous completion of descent of the testis is said to be extremely rare after the age of puberty.

In the matter of spermatogenesis there is also considerable debate, but it is generally accepted that if a testicle is not in the scrotum by puberty, it will not acquire the power of producing live spermatozoa, while some authorities hold that it must be brought into the scrotum within the first five years of life.

Internal secretion used to be considered unlikely in imperfectly descended testes, which were also abnormally small, but it is now said to be possible for a testis, even if it be undersized, to contain interstitial tissue in sufficient quantity to enable normal physical and mental development to take place, in the absence of a normal testis on the other side.

A further relevant point is the occurrence of a patent funicular process in cases of imperfect descent; this appears to be so in 75% of cases.

This case seems, then, to illustrate several of the rarer possibilities in the history of imperfect descent of the testis. The condition was bilateral, the right testis being abnormally small; the left and normal-sized organ completed its descent spontaneously into the scrotum at the age of 25, and at the age of 27 was then apparently responsible for spermatogenesis (the onset of toxic goitre at this point is of interest); at the age of 33, eight years after its descent was complete, malignant change became evident, though it is impossible to say how long the actual neoplastic process had been going on, especially as the rate of growth of this "atypical" variety is very variable. In this case both funicular processes were patent. The subsequent destruction of testicular tissue and final operative removal have produced no obvious change in the physical or mental metabolism of the patient; further changes may, however, be marked by metastatic recurrence of the disease process.

In conclusion, one may say the imperfectly descended testis is very vague as to its future course.

My thanks are due to Professor Gask for permission to publish this case-report.

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D. F. ELLISON NASH.

STUDENTS' UNION.

RUGBY FOOTBALL CLUB.

ST. BARTHOLOMEW'S HOSPITAL *v.* OLD PAULINES.

Played at Winchmore Hill on Saturday, February 17th. Won, 25—3.

The Hospital, fielding what might fairly be described as their strongest side, easily defeated the Old Paulines by the convincing margin of five goals to one try in a game which was productive of much bad scrummaging, some fine kicking by Morison and a display of resolute speed by Youngman, which drew from one spectator the breathless remark, "That's Youngman, that was".

The marked superiority of the Hospital, though a pleasing phenomenon to the partisan, detracted somewhat from the excitement of the game, which, especially during the first half, was exceptionally uninteresting. Full credit is due to the fine work of forwards and backs alike, but our heavy score was in a large part due to the lack of "covering" and to the poor defence of our opponents.

Late in the first half Fairlie-Clarke scored the first try, rounding off a movement which commenced with Wilson and passed through at least seven players' hands—a combined effort which fully merited its reward.

A drop-kick from Kingdon soared away narrowly to fail; Nel and Blusger in turn on one wing, and Youngman on the other, were pulled down on the line, Wilson kicked twice for touch, scored a determined try, and Bart.'s crossed over with a 10-point lead.

For the first few minutes of the second half the Old Paulines struggled hard and a score seemed imminent, but the Hospital defence proved more than adequate, the ball eventually being worked up the field in forward rushes by a well-controlled pack.

Two tries by Youngman followed in rapid succession; receiving the ball on the half-way line on each occasion, he outdistanced every player on the field, swerving past the full back and giving Morison the chance to kick two more goals. A minute later he caught the full-back in possession and kicked the ball over the line, where Jackson, narrowly preceding a Pauline defender, threw himself on it. Morison kicked his fifth consecutive goal.

Shortly after, Salmons cut through and gave the ball to Nicholls, who scored the Old Paulines' only try, which Schneerson failed to convert.

Team.—C. R. Morison (*back*); J. G. Youngman, G. A. Fairlie-Clarke, I. N. Blusger, J. G. Nel (*three-quarters*); J. R. Kingdon, J. D. Wilson (*halves*); E. M. Darmady, R. S. Hunt, P. D. Swinstead, J. M. Jackson, E. E. Harris, J. C. Newbold, W. M. Capper, R. Mundy (*forwards*).

ST. BARTHOLOMEW'S HOSPITAL *v.* DEVONPORT SERVICES.

This match was played at Winchmore Hill on Saturday, March 10th, and was lost by 2 tries (6 pts.) to *nil*.

Severe rain and a severe hailstorm almost ruined this game. It was chiefly a forward game, with the Services' heavier pack having somewhat the better of the struggle.

Both tries were scored in the early part of the game before the conditions became almost impossible for handling. Evans intercepted a pass between our centres, ran hard, and then passed to

Kirby to score in the corner. The try was not converted. Soon afterwards Kirby again scored in the corner, rounding off a good three-quarter movement. The attempt at conversion failed. Bart.'s, together with the weather, improved considerably in the second half, and attacked continuously, and it was only the superb defence of the Services that prevented our scoring. Youngman had very hard luck in not scoring twice, being brought down on the line on each occasion. Our pack were now holding their own in the tight and the loose, and playing very well. Morison was in very good form, and his kicking had great length. The game ended with Bart.'s still on the attack. We were perhaps rather unlucky in not having made the game a draw after our splendid second-half recovery.

HOCKEY CLUB.

Semi-Final Inter-Hospital Cup.

ST. BARTHOLOMEW'S HOSPITAL *v.* KING'S COLLEGE HOSPITAL.

Played on Wednesday, February 28th. Lost, 0—1.

Bart.'s were unfortunate in that through injuries they were fielding a much weakened side. The game, however, was an exceedingly good one, and all, including the substitutes, played as well as at any time this season. Masina, brought in to partner Thorne-Thorne at back, was always dependable, clearing to the wings with precision; while Heasman, playing in the unaccustomed position of left half, worked, as usual, tremendously hard. The forward line managed a very much more open game than usual, and given a little more dash might have scored on several occasions.

Play started with a ding-dong struggle, which at first was to give neither side the advantage, though Hinds-Howell was unlucky with a hard shot which just cleared the cross-bar. Hill made some good runs down his wing, and one or two resulting corners proved fruitless. Half-time arrived with no goals scored.

Following half-time, however, King's College Hospital broke away once and, through a fast inside left, drew Crosse out of goal and scored with a clever bit of dribbling. Though Bart.'s played with redoubled vigour, they were unable to equalize.

Team.—J. M. Crosse (*goal*); B. Thorne-Thorne, A. M. Masina (*backs*); P. Jayes, J. R. Winter, L. Heasman (*halves*); P. G. Hill, A. Hinds-Howell, K. W. Martin, K. Lumsden, J. M. Lockett (*forwards*).

ST. BARTHOLOMEW'S HOSPITAL *v.* READING UNIVERSITY.

Played on Saturday, March 10th. Lost, 3—2.

The game was a fitting close to the season, being both spirited and exciting. With a team half composed of the second eleven, Bart.'s yet led an almost unbeaten side by two goals for the major part of the first half. Crosse in goal was particularly conspicuous, saving repeatedly with brilliance; Masina at centre half worked hard; and Sharpe, Blackburn and Lockett formed a wing which was often within inches of scoring.

Play started briskly, and Bart.'s, adopting the hard-hitting, open game, very soon scored through Sharpe, from a short corner—a beautifully cool and hard shot taken from an awkward pass. The Hospital circle was then raided, and only Crosse's brilliance stopped Reading from scoring. Later Blackburn dribbled through to score for the Hospital, a score which was answered just before half-time by Reading (2—1).

The second half started disastrously, for Reading snapped up two quick goals (2—3). From thence till time both sides strove desperately, the one to equalize, the other to maintain their lead. Sharpe and Blackburn were particularly conspicuous in a team which to a man were playing very hard, the latter seeing one of his shots bounce off the post and travel the whole length of the goal-line. The whistle was blown for time with no alteration in the score.

Team.—J. M. Crosse (*goal*); B. Thorne-Thorne, P. M. Wright (*backs*); P. Jayes, A. M. Masina, C. F. Maddox (*halves*); P. G. Hill, A. Innes, A. E. Sharpe, G. Blackburn, J. M. Lockett (*forwards*).

BOXING CLUB.

The United Hospitals Boxing Competition was held at The Ring, Blackfriars, on Monday, March 12th, and resulted in an overwhelming victory for Bart.'s. Six of the eight weights fell to the team, who scored 34 points to the 17 points of Mary's, who were second.

St. Bartholomew's drew first blood with the first fight of the evening, in which Moseby beat Lewis of Guy's fairly easily. Lewis is an experienced man, but Moseby's speed and weight were too much for him.

Bose had a very close fight with Griffiths of St. Thomas's, who was his most serious contender for the bantam weight title, and the issue was in doubt till the end. Bose, however, was more accurate in his hitting; he scored well with both hands on the retreat, and secured the verdict without recourse to the referee.

Fysshe disposed of Leach of St. Mary's before the first round was half way through by a series of beautifully-timed body punches.

Slowe put up a good display in beating Gill of St. Thomas's. His opponent was very strong, and in the first round Slowe made the mistake of trying to "mix it" with him—getting the worst of it. Early in the second round he "shook" his man by two quick right counters and outclassed him for the rest of the round. The final round was very closely contested and was fought amidst rousing cheers, but Slowe's ring-craft stood him in good stead and we secured the verdict.

Taylor lost a good fight to Warren of London. The latter is an experienced and clever boxer, with a very long reach, and Taylor was "giving away" nearly a stone in weight. All the same, Taylor put up a very good fight and got home some excellent right uppercuts. He should learn to be more aggressive and constructive in his boxing.

Kirkwood met Clarkson of Guy's in the semi-final of the heavy-weights. Clarkson has twice beaten him before, but this time Kirkwood made no mistake, and got home a series of terrific blows, the fight being stopped in the first round.

We were disappointed to find Butt with only one opponent between him and the flyweight title, but Wilson of St. Thomas's put up a very good show, and Butt had to bring out all his skill to defeat him.

In the final of the bantams Bose found himself against a very aggressive fighter in Herman of London Hospital, but scored cleverly and accurately with both hands on the retreat, and himself attacked whenever he got the chance. At the end of the second round he launched a whirlwind attack and had his man badly shaken; the fight was stopped after a virtual knock-out early in the final round.

David met Goliath in the final of the feathers, for Fysshe was opposed to a man of exceptional physique in E. W. Rees of St. Thomas's, who is 6 ft. in height and a strong, experienced boxer. Fysshe, however, took many heavy blows and then got inside Rees's defence to score freely with left hooks to the body and head. In the second round Rees tried to hold him off with his long left, but Fysshe feinted and wormed his way in, and served such a succession of telling blows that he knocked his man out before the round was half way through.

Moseby beat D. F. Rees of St. Thomas's in the semi-final of the light-weights. The fight was very closely contested, and the three rounds were fought at a great pace. Moseby, however, had the advantage in speed and lasted better in the final round.

The final of the light-weights produced one of the best fights of the evening. Moseby was opposed to Mayer of London, the Captain of the U.H.B.C. Mayer got in some stiff blows at close quarters in the first round, but towards the end of the round Moseby got the measure of his man, and scored well with straight lefts and a quick right cross. In the second round he used his left to advantage against a tiring opponent, and in the final round he added to the victory by a whirlwind two-handed attack and knocked his man out.

Slowe won the final of the welters on a walk-over from Lomax of Guy's, who had damaged his eye in a previous fight. Slowe himself had damaged his right hand in training a week before, and in winning his gruelling semi-final fight fully deserved the welter-weight title.

In the final of the light heavy-weights, Armstrong, who had had a walk-over in the semi-final, was opposed to Ross of St. Mary's, a very sturdy boxer with a terrific punch in both hands. Armstrong, however, was very game and, although knocked down eight times in the first round, he continued to be full of aggression until the referee stopped the fight in favour of Ross.

The final triumph of the evening was Kirkwood's victory over Welpler of St. Mary's in the final of the heavy-weights. He had the advantage of weight, but Welpler is no mean boxer, and at the end of the second round a shrewd blow would have knocked either man out. Both, however, survived to fight the three rounds, and Kirkwood gained a well-merited decision on points.

The evening was a triumph for our trainer, Matt Wells, for we were the fittest team in the competition. Moseby, Fysshe, Slowe and Bose were all considerably overweight for some weeks preceding the competition, and he brought them to the scales just inside their weights, whilst Moseby's victories in three very hard fights is a testimony to their fitness.

The only previous holders of titles are Butt and Slowe. Three of this year's winners, Moseby, Fysshe and Bose, are entirely new to

the competition, whilst Kirkwood has at last received the reward of all the hard work he has put in at his boxing.

The following is a list of the results in the competition.

Fly-weight: Final—A. Butt (Bart.'s) (holder) beat D. R. Wilson (St. Thomas's) on points.

Bantam: Semi-final—C. F. Bose (Bart.'s) beat L. Griffiths (St. Thomas's) on points. Final—Bose beat H. Herman (London) on points.

Feather: Semi-final—T. G. Fysshe (Bart.'s) beat P. W. Leach (St. Mary's) in first round. Final—Fysshe beat E. W. Rees (St. Thomas's) in second round.

Light: 1st series—W. G. Moseby (Bart.'s) beat G. G. Lewis (Guy's) on points. Semi-final—Moseby beat D. F. Rees (St. Thomas's) on points. Final—Moseby beat S. G. Mayer (London) in 3rd round.

Welter: Semi-final—J. J. Slowe (Bart.'s) (holder) beat H. W. Gill (St. Thomas's) on points. Final—Slowe w.o., J. A. Lomax (Guy's) injured.

Middle: Semi-final—C. P. Warren (London) beat L. R. Taylor (Bart.'s) on points. Final—G. J. Ambrose (St. Mary's) beat Warren on points.

Light heavy: Final—R. W. Rees (St. Mary's) beat J. H. Armstrong (Bart.'s) in first round.

Heavy: Semi-final—R. M. Kirkwood (Bart.'s) beat P. W. Clarkson (Guy's) in first round. Final—Kirkwood beat C. Welpler (St. Mary's) on points.

F. G. W.

REVIEWS.

DIABETES: REASONS AND RECIPES. By E. E. CLAXTON, M.B., B.S., and LUCY BURDEKIN. With a foreword by GEORGE GRAHAM, M.D., F.R.C.P. (London: John Lane, The Bodley Head, 1933.) Pp. xvi + 188. 10 plates. Price 5s. net.

The frontispiece of this invaluable little book serves very well as a text for its message. It is a photograph of healthy-looking Six-years-old taking a keen interest in injecting his own dose of insulin. The authors' endeavour is to remove the "poor diabetic" from that group where "the same breakfast is eaten every morning" to the one "with something different every day", into which two classes Dr. Graham divides mankind as he gives his blessing to the book. The patient need be pitied no longer as one fettered by restrictions and regarded as an invalid.

The *Reasons* explain in the clearest way the principles of diet and the methods of testing and injection. Enough is told of the disease to make the various steps rational to the patient, thus ensuring his co-operation in what otherwise would be a tedious discipline. The functions of insulin are carefully explained with the aid of illustrations which are models of technical photography. The chapter on diet is a simple description of the composition of foods and of the three methods of restricting the carbohydrate intake: a fixed carbohydrate allowance; a definite number of each of the food components; and thirdly, that based on Lawrence's "Line Ration Scheme": (a good copy of the scheme is reproduced). The principle of the book is summed up in a sentence: "It doesn't matter what you eat provided you know what the food contains, so that you can judge how much you may take." This section closes with some most practical answers to twenty of the questions which must constantly arise in the minds of those under treatment.

The remaining 120 pages give over two hundred and twenty *Recipes* of every description, with food-value tables and sample diets. Each recipe is accompanied by its food value, based on the carbohydrate "portion" of 5 grammes. There is such a variety of pleasant dishes that, except for the preciseness of the quantities, the recipes might be those used by any cook. There is a useful list arranging the recipes into groups of different carbohydrate quantity, for use in making up a meal to the correct value.

The book is attractively produced, and the type is so chosen that points of importance stand out in clear emphasis. It is remarkable that it can be published at such a low cost. The language is for the layman, and is so pleasantly written that we are not surprised to see in answer to the question, "What are the most important points in treatment?", with two others, the reply, "Keep smiling". The authors have succeeded in their object of giving "enough recipes and cookery hints to satisfy the enthusiastic diabetic, and to enthuse those who lack sufficient interest to work out their own salvation".

The book is certainly one to be given or, at the least, recommended to every diabetic by his friend and doctor.

CAJAL'S HISTOLOGY. (London: Baillière, Tindall & Cox, 1933.) 9 × 9½. Pp. xiv + 738. Figs. 535. Price 40s.

For many years the brilliance of the Spanish school of histologists has shed a radiance over the subject which they have made their own. Outstanding in the school is S. Ramon-Cajal, who has acquired an international reputation. Any work on histology bearing this illustrious name is sure of an adequate welcome.

In Spain the medical student early acquires a sound knowledge of this important subject, and is next introduced to histo-pathology. He thus obtains a detailed knowledge of the intimate structure and functions of the various organs of the body in health and disease.

This work is a translation of Cajal's textbook for students, and we consider ourselves fortunate that his vivid teaching has become available for English-speaking students.

As would be expected, the section devoted to the histology of the nervous system is by far the best in the book. Every part of this system has been laid bare in the greatest detail. The illustrations in this section are illuminating, and give impressions which are lasting. This latter quality is valuable to the student of histology. The complicated mechanism of cellular division is discussed with great clarity, and details are given of the formation of the blood-cells, with helpful diagrams. A good deal of the book is elementary, and it was designedly written thus.

A useful section is appended on histological methods, together with a section on the preparation of materials.

The work is beautifully produced, and we give a high commendation.

RECENT BOOKS AND PAPERS BY ST. BARTHOLOMEW'S MEN.

APPLETON, A. B., M.D. "Postural Deformities and Bone Growth." *Lancet*, March 3rd, 1934.

ATKINSON, E. MILES, F.R.C.S. "Aural Vertigo." *Clinical Journal*, April, 1934.

BETT, W. R., M.R.C.S., L.R.C.P. *Editor of "A Short History of Some Common Diseases by Divers Authors"*. London: Oxford University Press, 1934.

BLAIR, HENRY, M.B., B.S., M.R.C.S., L.R.C.P. (S. WATSON SMITH, M.D., F.R.C.P., and H. B.). "A Case of Hæmachromatosis." *British Medical Journal*, April 14th, 1934.

BRADLEY, E. J., *M.C.*, M.D. (Cantab.), F.R.C.S.(Edin.). "Notes on a Small Outbreak of Glandular Fever." *British Medical Journal*, April 28th, 1934.

BUCHANAN, Sir GEORGE S., C.B., M.D., F.R.C.P. "International Co-operation in Public Health: Its Achievements and Prospects." *Lancet*, April 28th, 1934.

BURROWS, HAROLD, C.B.E., M.B., F.R.C.S. "Some Experimental Observations Bearing on the Etiology of Megacolon." *British Journal of Surgery*, April, 1934.

CHOPRA, R. N., M.A., M.D., I.M.S. (and CHAUDHURY, S. G., and GUPTA, J. C.). "On Electrocardiograms. Part I: Blood-Pressure and Electrocardiographic Changes with Muscle Extract." *Indian Journal Medical Research*, January, 1934.

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——— (and CHOWHAN, J. S.). "Action of the Indian Daboia (*Vipera russellii*) Venom on the Circulatory System." *Indian Journal Medical Research*, January, 1934.

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CHRISTOPHERSON, J. B., C.B.E., M.D., F.R.C.P., and WARD, R. OGIER, D.S.O., M.Ch., F.R.C.S. "Bilharzia Disease in England." *British Journal of Surgery*, April, 1934.

COCKAYNE, E. A., D.M., F.R.C.P. "Congenital Pyloric Stenosis in First Cousins." *Lancet*, April 28th, 1934.

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HADFIELD, GEOFFREY, M.D., F.R.C.P. (and MAGEE, V., M.B., and PERRY, C. B., M.R.C.P.). "The Lysis of Fibrin by Streptococci: Its Application to the Problem of Rheumatic Infection in Children." *Lancet*, April 21st, 1934.

HAMMOND, T. E., F.R.C.S. "Some Principles in the Surgery of Tuberculosis." *Tubercle*, March, 1934.
——— "Euthanasia." *Practitioner*, April, 1934.
HERNAMAN-JOHNSON, F., M.D., D.M.R.E. "The Radiation Treatment of Neoplasm." *British Journal of Radiology*, March, 1934.
HILTON, REGINALD, M.D., F.R.C.P. "Carbon Dioxide Therapy in Lobar Pneumonia." *British Medical Journal*, March 10th, 1934.
KERSLEY, G. D., M.D., M.R.C.P. "Leaking Cerebral Aneurysm." *British Medical Journal*, March 3rd, 1934.
KETTLE, E. H., M.D., F.R.C.P. "The Detection of Dangerous Dusts." *Lancet*, April 28th, 1934.
LEVITT, W. M., M.D., M.R.C.P., D.M.R.E. "The Radium Treatment of Neoplasm, with Special Reference to the Relative Values of Hard and Soft Rays." *British Journal of Radiology*, March, 1934.
MCCURRICH, H. J., M.S., F.R.C.S. (E. BRUCE LOW, M.B., and H. J. McC.). "Full-term Ectopic Gestation." *British Medical Journal*, April 14th, 1934.
NAPIER, L. EVERARD, M.R.C.S., L.R.C.P. (and SMITH, R. O. A., and KRISHNAN, K. V.). "The Effect of a Plasmodial Infection in Increasing Susceptibility to Leishmania Infection in Monkeys." *Indian Journal Medical Research*, January, 1934.
——— (and SMITH, R. O. A.). "Dermal Leishmaniasis in Assam." *Indian Journal Medical Research*, January, 1934.
PARSONS, F. B., M.D., M.R.C.P. "Anæsthesia in Labour: A Review of Modern Progress." *Practitioner*, March, 1934.
PHILLIPS, J. G. PORTER, M.D., F.R.C.P. "Medico-Legal Problems in General Practice. III: The Medico-Legal Aspects of Mental Disorders." *Practitioner*, March, 1934.
POWER, Sir D'ARCY, K.B.E., F.R.C.S. "Ipsissima Verba. I: Lister and Wiring the Patella." *British Journal of Surgery*, April, 1934.
PYBUS, F. C., M.S., F.R.C.S. "A Case of Gas-cysts of the Intestine." *British Journal of Surgery*, January, 1934.
RAY, P. N., F.R.C.S. "Spontaneous Dislocation of the Hip in Childhood." *British Journal of Surgery*, January, 1934.
ROCHE, ALEX. E., M.D., M.Ch., F.R.C.S. "The Incompletely Descended Testicle." *Clinical Journal*, April, 1934.
SCOTT, RONALD BODLEY, B.M., M.R.C.P. "Aneurysm of the Pulmonary Artery. With Report of a Case." *Lancet*, March 17th, 1934.
SPARKS, J. V., M.R.C.S., D.M.R.E. "Paper Films in Radiography." *Lancet*, April 21st, 1934.
——— "The Radiology of Heart Disease (Technique of Cardiology)." *British Journal of Radiology*, December, 1933.
WALKER, KENNETH, M.B., F.R.C.S. "Sterility in the Male." *Practitioner*, March, 1934.
WARD, R. OGIER, D.S.O., M.Ch., F.R.C.S. *See* Christopherson and Ward.
WEBER, F. PARKES, M.D., F.R.C.P. "Transient Massive Albuminuria After Chromocystoscopy in a Psycho-Neurotic Individual." *British Medical Journal*, April 7th, 1934.
——— (and SCHWARZ, E., M.D.). "Severe Relapsing Anæmia in a Case Apparently of Hodgkin's Disease." *Lancet*, March 31st, 1934.
YOUNG, F. H., O.B.E., M.D., F.R.C.P., D.P.H. "Some Theoretical Aspects of Collapse Therapy." *British Medical Journal*, April 14th, 1934.

EXAMINATIONS, ETC.

University of London.

Second Examination for Medical Degrees, March, 1934.

Part I.—Allen, W. H. E., Ballantyne, J. C., Banaji, P. B., Bennett, D. L., Boatman, D. W., Brockbank, C. A., Brownlees, P. A. K., Burns, B., de Senneville, R., Dobree, J. H., Dunn, D. M., Edwards, J. A. C., Evill, C. C., Fagg, C. G., Frazer, A. L., Golledge, N. H. H., Grossmark, S., Grunbaum, A., Hall, W. S., Harrisson, G. J., Herson, R. N., Hudson, E. G., Ives, L. A., Jayes, P. H., Jones, E. C., Kemp, J. W. L., Kruatrachue, G., Little, A. W., McEwen, P. D. R., McMahon, R. J. H., Macrae, D. E., Morse, D. V., Parkinson, T., Peyton, H. N., Rees, H. N., Reilly, C. P. C., Staley, G. R., Stone, S. D., Swinstead, P. D., Terry, R. B., Vandy, K. W., Young, N. A. F.

Part II.—Acharya, B. S. S., Baker, F. J. S., Bateman, A. D., Baum, I. H., Blakelock, L. H., Brooker, A. E. W., Carpenter, M. A., Dubash, J. J., Ellis, B. H., Ennis, J. E., Fearnley, J. D. O., Foster, L., Goodrich, B. H., Hambly, E. H., Herbert, G., Hoadley, J., Jackson, H., Jenkins, S. T. H., Jordan, A., Longland, C. J., Lopez Garcia, L. J., McKane, T. O., Mountjoy, E. R., Pearce, H. A., Roualle, H. L. M., Stevenson, R. Y., Thomson, J. W., Thompson, R. W., White, R. A., Woddis, G. M.

CHANGES OF ADDRESS.

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DUNDAS-GRANT, Sir JAMES, 5, Harley House, Upper Harley Street, N.W. 1. (Tel. Welbeck 1892.)

APPOINTMENT.

BRAIMBRIDGE, C. V., M.V.O., B.Ch.(Cantab.), F.R.C.S.(Edin.), E.A.M.S., appointed Surgical Specialist, Kenya.

BIRTHS.

ANGEL.—On April 9th, 1934, at Penlea House, Launceston, Cornwall, to Dorothy, wife of Rowland Eric Angel—a son.
EDWARDS.—On February 25th, 1934, at 12, Godfrey Road, Newport, to Edith, wife of J. T. Rice Edwards—a son.
GOODWIN.—On April 21st, 1934, at Hangchow, China, to Sheelah and T. S. Goodwin, M.D.—a daughter.
LANGHORNE.—On April 16th, 1934, to Yvonne (*née* Jessop), wife of Douglas Alfred Langhorne—a son.
ORCHARD.—On April 8th, 1934, at 12A, Kensington Court Place, to Sheila, wife of Dr. Stuart Orchard—a son.

MARRIAGES.

BARBER—SYKES.—On April 21st, 1934, at the Parish Church, Orpington, by the Rev. T. Sedgwick, assisted by the Rev. S. Osborne, Vicar of Orpington, Stanley Ward, younger son of Dr. F. S. Barber, of Streatham, to Margaret Lesley, only child of Mr. and Mrs. Ernest Sykes, of Orpington.
SINCLAIR—PULESTON.—On April 21st, 1934, at Parish Church, Watford, Charles Gordon Sinclair, F.R.C.S., younger son of Mr. and Mrs. C. P. Sinclair, of Roxburgh, Bushey, to Margaret Gwenyth, only daughter of Mr. and Mrs. P. E. Puleston, of Langholm, Watford.
TURNER—INGRAM.—On April 14th, 1934, at All Saints', Ennismore Gardens, by the Rev. H. M. Relton, D.D., assisted by the Rev. R. H. Streatfeild, uncle of the bridegroom, Ronald E. S. Turner, second son of Mr. and Mrs. Cecil W. Turner, of 49, Cleveland Square, W. 2, to "Peggy", only daughter of the late John Ingram and Mrs. Ingram, of 6, Victoria Grove, Kensington.

DEATHS.

ADAMS.—On February 26th, 1934, Edna Sybil, beloved wife of Dr. F. N. Adams, of "Pendower", Crown Hill, Devon.
ANDERSON.—On April 7th, 1934, at Royal Masonic Hospital, W., Donald Drysdale Anderson, M.R.C.S., L.R.C.P., West African Medical Service, aged 37.
BROWN.—On April 8th, 1934, Frederick Nathaniel Brown, L.R.C.P., M.R.C.S., of Hale Cottage, Sandbanks Road, Parkstone, Dorset.
FERNIE.—On March 30th, 1934, at Stone, Staffordshire, John Firth Fernie, M.R.C.S., L.R.C.P., aged 61.
TANNER.—On April 12th, 1934, at Tancred's Ford, Farnham, Surrey, Charles Edward Tanner, M.D., F.R.C.S., J.P., aged 73.

NOTICE.

All Communications, Articles, Letters, Notices, or Books for review should be forwarded, accompanied by the name of the sender, to the Editor, ST. BARTHOLOMEW'S HOSPITAL JOURNAL, *St. Bartholomew's Hospital, E.C. 1.*

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